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Clarification of Page 2-2 for "Final Report, Design Analysis for Anamorphic System for High Power Stereoviewer", concerning optical performance.

It is stated that the optical performance of the anamorphic attachment is essentially diffraction limited and does not reduce the overall performance of the High Power Stereo Viewer with or without [] eyepieces and objectives. By this is meant that the anamorphic eyepiece is corrected to within the quarter wavelength [] criterion. It should cause no degradation of the High Power Stereoviewer image quality. However, without detailed knowledge of the design of the [] objectives and eyepieces it is not possible to adequately analyze the system and prove lack of degradation. Any degradation will be minor and therefore resolution with the anamorphic eyepiece is specified to be at least 90% of that with the [] eyepiece when using [] objectives. The test method will consist of measuring the resolution of a High Power Stereoviewer with [] objective and eyepiece, then replacing the conventional eyepiece with the anamorphic eyepiece and again reading the resolution of the system. The latter readings will be at least 90% of the former readings.

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In the matter of field curvature, the field obtained with the attachment is slightly flatter than that with the unequipped High Power Stereo Viewer. The anamorphic system is composed of two doublets and a field lens acting as auxiliary optics for the prism anamorphic zoom. The unit, when installed, replaces the field lens of the Stereo Viewer. The prism zoom system contributes no field curvature. The doublets, however, do have field curvature contributions inversely proportional to their average glass index and focal length. Since the indices are the same and the focal lengths are about equal but of opposite sign, then two field curvature contributions cancel each other out. The only field curvature contribution that remains in the anamorphic attachment is that of its field lens. This field lens has a longer focal length than the one it replaces in the Stereo Viewer and therefore its field curvature contribution is smaller. The net result is that when the field lens of the Stereo Viewer is replaced by the anamorphic attachment, the system field curvature is somewhat less.

NGA Review Complete

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TECHNICAL BACKGROUND PROCUREMENT INFORMATION

I. Contractor

A. Name and address:

B. Evaluation of previous performance:

II. Brief description of this procurement: Design and fabrication of advanced

anaglyphic Eyepieces for use in High-Power Stereoviewer.

Estimated total amt. \$

A. Deliverable items: One pair advanced anaglyphic Eyepieces

Operational Manual

B. Is this procurement for other than a standard, "off the shelf" or slightly modified commercial item? YES If "yes", is it anticipated that any more of this unit will be procured? YES If so, a complete set of directly reproducible manufacturing drawings and specifications would normally be included in this procurement. Comments: This

would be desirable.

C. Will contract cover a period of more than 90 days? YES
If "yes", are progress reports desired? YES If so, indicate frequency, content and number of copies desired: Should follow

specification DB-1001 as revised 31 August 1966.

D. Is any Government-owned property to be provided to the contractor?

NO

If so, list and indicate its availability (where, when,

etc.)

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E. Is any special tooling involved? None

F. Security:

1. Association with the Sponsor is CONFIDENTIAL
2. The specifications and/or drawings are UNCLASSIFIED
3. The item is UNCLASSIFIED
4. Contractor personnel known to be aware of this proposed procurement:

5. Other security information The proper security measures are in effect as a result of previous contact with this company.

III. Reasons for selection of this source. If other sources were considered, indicate results. If no other sources were considered, list the reasons why this firm is considered to be uniquely qualified to perform this work.

Seven companies were invited to bid of which three responded.

One selected because:

1. They had best technical approach.
2. Their previous experience in field of fabrication of anamorphic spectacles.
3. They are a manufacturer of High-Power Stereoviewer.
4. Their bid and their estimate for the production costs was the lowest of the three.

IV. If contract will cover deliverable item(s) state room location where equipment will be installed N.A. (It is extremely important that the Engineering Data Sheet including room location and any other pertinent facts be submitted to NPIC Engineering Section as far as possible in advance of delivery.)

V. Technical contact

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In the event additional space is required, use the reverse side(s) of this form, with a reference to the item number to which the comment applies.

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